

CLAIMS

Therefore, having thus described the invention, at least the following is claimed:

- 1 1. A first digital subscriber line (DSL) modem communicatively coupled
2 with a second DSL modem, the first DSL modem comprising:
3 a digital signal processor configured to selectively configure at least one system
4 parameter in response to an identification of a manufacturer of the second DSL modem;
5 and
6 a memory device communicatively coupled to the digital signal processor
7 configured to store the at least one system parameter, wherein the system parameter is
8 pre-configured to optimize data communications between the first and second DSL
9 modems.
- 1 2. The modem of claim 1, wherein the memory device is configured to store
2 at least one operational algorithm pre-configured to optimize data communications
3 between the first and second DSL modems.
- 1 3. The modem of claim 1, wherein the digital signal processor applies at least
2 one system parameter upon initial power-up in response to a default manufacturer
3 associated with the second DSL modem.
- 1 4. The modem of claim 2, wherein the digital signal processor applies at least
2 one operational algorithm upon initial power-up in response to a default manufacturer
3 associated with the second DSL modem.
- 1 5. The modem of claim 3, wherein the digital signal processor is configured
2 to compare the default manufacturer identification with actual manufacturer identification
3 information received during DSL initialization training.

6. The modem of claim 5, wherein the digital signal processor is configured to determine if expected system performance gains associated with retraining the DSL justify a retrain with system parameters previously identified as suitable for optimizing data communications between the first and second DSL modems.

7. The modem of claim 5, wherein the modem is configured to replace the default manufacturer associated with the second DSL modem with the actual manufacturer identification information received during DSL initialization training.

8. A digital subscriber line (DSL) communication system, comprising:
a first modem configured to appropriately apply at least one system parameter pre-configured to optimize data communications with DSL modems originating from a specific manufacturer;
a two-wire pair telephone line communicatively coupled to the first modem; and
a second modem communicatively coupled to the two-wire pair telephone line.

9. The digital subscriber line (DSL) of claim 8, wherein the first modem is configured to appropriately apply at least one operational algorithm responsive to the manufacturer of the second modem.

10. The digital subscriber line (DSL) of claim 8, wherein the first modem is pre-configured with a set of system parameters selected to optimize data communications on a DSL formed with a second modem from a particular manufacturer.

11. The digital subscriber line (DSL) of claim 9, wherein the first modem is pre-configured with at least one operational algorithm pre-configured to optimize data communications on a DSL formed with a second modem from a particular manufacturer.

1 12. A digital subscriber line (DSL) modem, comprising:
2 means for applying a default variable identifying the manufacturer of a
3 communicatively coupled remote DSL modem; and
4 means for selectively applying at least one system parameter during initial DSL
5 system training in response to the identified manufacturer of the remote modem.

1 13. The modem of claim 12, further comprising:
2 means for selectively applying at least one operational algorithm during initial
3 DSL system training in response to the identified manufacturer of the remote modem.

1 14. The modem of claim 12, further comprising:
2 means for determining if at least one system parameter responsive to the actual
3 manufacturer of the remote modem would result in a measurable difference in DSL data
4 transfer characteristics when compared to current DSL data transfer characteristics using
5 the default variable identified system parameter.

1 15. The modem of claim 12, wherein the means for applying a default variable
2 comprises a memory device.

1 16. The modem of claim 12, wherein the means for selectively applying at
2 least one system parameter comprises a table in a memory device responsive to the
3 default variable.

1 17. The modem of claim 13, further comprising:
2 means for determining if at least one operational algorithm responsive to the
3 actual manufacturer of the remote modem would result in a measurable difference in DSL
4 data transfer characteristics when compared to current DSL data transfer characteristics
5 using the default variable identified at least one operational algorithm.

1 18. The modem of claim 14, wherein the means for determining if at least one
2 system parameter responsive to the actual manufacturer of the remote modem would
3 result in a measurable difference in DSL data transfer characteristics comprises a digital
4 signal processor in communication with a memory device.

1 19. The modem of claim 17, wherein the means for determining if at least one
2 operational algorithm responsive to the actual manufacturer of the remote modem would
3 result in a measurable difference in DSL data transfer characteristics comprises a digital
4 signal processor in communication with a memory device.

1 20. A method for optimizing digital subscriber line (DSL) system performance
2 between first and second DSL modems supplied by different manufacturers, comprising:
3 supplying a default manufacturer identification to a first modem;
4 applying appropriate system parameters in response to the default manufacturer
5 identification;
6 initiating DSL system start-up training;
7 receiving the actual manufacturer identification from the second DSL modem;
8 making a determination if the system parameters are suitable for DSL operation
9 with the actual manufacturer of the second modem;
10 adjusting system parameters when required in response to the actual manufacturer
11 identification; and
12 establishing the DSL link.

1 21. The method of claim 20, wherein the step of supplying a default
2 manufacturer is responsive to the most probable vendor in a geographic area.

1 22. The method of claim 20, wherein the step of making a determination if the
2 system parameters are suitable for DSL operation with the actual manufacturer of the
3 second DSL modem is replaced with the steps of:
4 replacing the default manufacturer identification information with the actual
5 received manufacturer identification; failing the DSL system start-up training; and
6 reinitiating the DSL system start-up training.